

REMARKS

Claims 1-24 remain pending in the application. Favorable reconsideration of the application is respectfully requested.

I. ALLOWABLE SUBJECT MATER

Applicant again acknowledges with appreciation the allowance of claims 1-20 and the indicated allowability of claims 23 and 24, subject to being amended to independent form.

II. REJECTION OF CLAIMS 21-22 UNDER 35 USC §103(a)

Claims 21-22 stand rejected under 35 USC §103(a) based on *Kim* (U.S. 6,049,361) in view of *Tzukerman et al.* (U.S. 6,724,829 - hereinafter *Tzukerman*). This rejection is respectfully traversed for at least the following reasons.

As previously pointed out, claim 21 relates to a network receiver for receiving a modulated carrier signal from another network transceiver via a network medium. The network receiver includes, among other things, a selection circuit for analyzing the carrier signal and automatically identifying whether the carrier signal is modulated in accordance with a first modulation method or a second modulation method. The selection circuit provides a gain control signal to the input amplifier to amplify the carrier signal with either a first amplifier gain setting or a second amplifier gain setting based on the modulation method identified by the selection circuit.

The Examiner admits that *Kim* does not teach automatically adjusting the amplifier gain setting based on the identification of whether the carrier signal is modulated in accordance with a first modulation method or a second modulation method. However, the Examiner contends that *Tzukerman* makes up for such deficiencies in *Kim* and that it would have been obvious to one of ordinary skill to modify *Kim* based on *Tzukerman* so as to result in the claimed invention. Applicant must respectfully disagree.

It is a well settled point of law that the proposed modification cannot render the prior art unsatisfactory for its intended purpose.

If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to

make the proposed modification *In re Gorden*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984), MPEP §2143.01(V).

Further, the proposed modification cannot change the principle of operation of a reference.

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959), MPEP §2143.01(VI).

Kim describes an automatic gain control (AGC) circuit for a high definition television (HDTV) receiver. *Kim* teaches selecting a first gain controller 214 or a second gain controller 225 based on whether a segment synchronizing signal is correctly detected. More specifically, the first gain controller 214 is selected when the segment synchronization signal is not detected, and the second gain controller 225 is selected when the segment synchronization signal is detected. The segment synchronization signal, which is loaded on the HDTV signal, is detected by a detector 112, which receives the high definition composite signal and identifies the segment synchronization signal from composite signal.¹

Thus, during a first portion of the HDTV signal, the first gain controller 214 may be selected, and during a second portion of the HDTV signal, the second gain controller 225 may be selected, and so on. This “gain switching” may occur throughout the reception of the HDTV signal. Each of the claims included in *Kim* recite the importance of controlling the gain in the AGC circuit based on whether the segment synchronizing signal is correctly detected (see, e.g., claims 1, 9, 13 and 26).

Accordingly, it is reasonable to conclude that the intended purpose of the invention of *Kim* is to receive an HDTV signal and provide the appropriate gain to the signal based on a segment synchronization signal loaded on the received HDTV signal.²

The Examiner’s proposed modification of *Kim* based on the teachings of *Tzukerman* clearly destroys the purpose of *Kim*. More specifically, by modifying the gain selection circuitry of *Kim*, which selects the gains based on a detected segment synchronization signal loaded on the HDTV signal, to a circuit that selects the gains based on the modulation methodology of the

¹ See Abstract, column 1, lines 55-63, column 3, lines 3-8 and column 5, lines 36-52 of *Kim*.

² See, e.g., Abstract and column 5, lines 26-52 of *Kim*.

HDTV signal (which conventionally operate on a single modulation methodology, i.e., HDTV signals conventionally do not change modulation methodologies), the invention of *Kim* would be inoperable as a gain selection circuit for use with conventional HDTV signals and, therefore, its purpose destroyed.

For example, if the circuit of *Kim* was modified to select gain controllers based on the modulation methodology of the HDTV signal, the circuit would **always** select the same gain, as the conventional HDTV signal does not switch between modulation methodologies. Thus, from this standpoint alone, the proposed modification would result in a circuit that is inoperable as a gain selection circuit with conventional HDTV signals. Accordingly, the Examiner's proposed modification renders the invention of *Kim* inoperable as a gain selection circuit for present HDTV signals and, thus, the invention of *Kim* would be unsatisfactory for its intended purpose.

Further, the Examiner's proposed modification also changes the principle of operation of *Kim*. *Kim* operates on the principle that HDTV signals include a plurality of segments formed by a segment synchronization signal, and that the segment synchronization signal can be extracted from the HDTV signal and used to select one of two different gain controllers. In order to operate as proposed by the Examiner, *Kim* must be modified so as to no longer extract the synchronization signal from the HDTV signal, and instead ascertain a modulation methodology implemented in the HDTV signal from a plurality of different modulation methodologies and select a gain based on the detected modulation methodology. Moreover, the format of the HDTV signal itself must be modified so as to include a plurality of different modulation methodologies. Clearly, this is a fundamental change in the principle of operation of the invention of *Kim*.

Further, and as noted above, conventional HDTV signals do not implement a plurality of different modulation methodologies, and instead operate on a single modulation methodology (e.g., QAM). Thus, unless the format of the HDTV signal itself is changed to use a plurality of different modulation methodologies, the proposed modification to the invention of *Kim* would not even work as a gain selector for HDTV signals. This further supports a finding that one would not be motivated to make the proposed modification.

Accordingly, *Kim* teaches directly away from the modification proposed by the Examiner.

For at least the above reasons, applicant respectfully submits that the Examiner's proposed combination would not be obvious as it defeats the express purpose of the teachings of *Kim*. In view of the above, applicant respectfully requests withdrawal of the rejection of claims 21 and 22.

III. CONCLUSION

Accordingly, all claims 1-24 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

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